

عنوان مقاله:

Single Phase Active Power Filter with Detection Method of Active Current Based on Modified Correlation Function

محل انتشار:

بیست و سومین کنفرانس بین المللی برق (سال: 1387)

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خلاصه مقاله:

In this paper a shunt active power filter (APF) has been used to filter harmonics and/or compensate reactive current drawn by nonlinear and/or linear loads. An online control method based on the discrete nonlinear model of inverters is applied to APF. The optimal feedback controls the APF current in a very fast and efficient manner. A novel extraction system based on the modified correlation function adopted as part of the control system of a single phase active power filter to provide the required reference signals for harmonic filtering and reactive power compensation. Advantage of the proposed modified correlation function is its implementation to network with distorted voltage. The compensation principle of the proposed control algorithm is presented in detail. The circuit is simulated using PSCAD/EMTDC software and simulation results are presented to validate the effectiveness of the novel compensation method.

کلمات کلیدی:

Active Power Filter (APF), Correlation Function, Harmonics, Power Factor

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